Human Factors in Aviation/ The Failing Aviator

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Outline

- Human Factors in Aviation
- Five Types of High Risk Aviators

Human Factors in Aviation

- Definition: The personal and professional concerns that interfere with an aviator’s ability to fly safely and effectively

Reference on Human Factors

- COMNAVAIRLANT INSTRUCTION 5420.5C (Human Factors Council and Human Factors Board Policy and Procedures)

Why so we care about human factors in aviation?

- What percentage of aviation mishaps are caused by “pilot error”?
- About 75%

The Problem …

- Fellow aviator peers and supervisors often know that an aviator is stressed - but do not speak up

Why are squadron members reluctant to express concern about a stressed aviator?

- fear of “contamination” (if Viper can’t hack it, maybe I will also have problems)
- embarrassment - that a squadron “bubba” is failing

Why might the aviator himself avoid asking for help?

- denial - a normal defense used by all successful aviators
- fear of extrusion from the squadron
- stigma of psychiatric illness
- (false) belief that psychiatric treatment means permanent grounding

Human Factors Problems in Mishaps

- The aviator has inadequate knowledge, skill, or discipline - to fly safely
- The aviator is overwhelmed due to personal problems

Personal Problems Facing Aviators

- medical conditions (cold)
- alcoholism
- family problems
- financial stress
- welcome changes - new child

Personal Problems (Job)

- disappointing training evaluation or fitness report
- passed over for promotion
- flying qualifications not current
- new position (mission commander)

Personal Problems Unique to Female Aviators(?)

- death of a close friend in an aircraft mishap
- perceived sexual harassment/hostile work environment

  (one study found this factor in 25% of overstressed female aviators)

How do these problems affect the stressed aviator?

- fatigue
- distraction (unable to compartmentalize)
- poor judgment
- excessive risk-taking (safety violations)
- poor communication and coordination with other aircrew

Potentially Dangerous Aviators

- overstressed aviator
- below average nugget or transition aviator
- consistent poor performer
- overconfident senior aviator
- best pilot/NFO (“ace of the base”)

Overstressed Aviator - Characteristics

- faces major life stressors *or many minor stressors*
- mood swings
- anger outbursts
- depression
- anxiety/panic attacks
- unable to compartmentalize
- suicidal or homicidal thoughts

Overstressed Aviator - Interventions

- temporary grounding
- flight surgeon evaluation
- mental health referral:
  - psychiatrist or psychologist
  - social worker (Family Service Center)
  - chaplain

Note: Mental Health referral is <u>not</u> a career-ender

Below Average Nugget/Transition Aviator

- behind peers in training
- fails exams/flight “downs”
- poor knowledge of procedures
- inadequate skills
- poor headwork
- lacks confidence

Below Average Nugget - Interventions

- remedial training
- “roll back” in training
- crew with best instructor
- minimize collateral duties
- honest, but constructive, debriefs (not a problem in VT-86!)

Consistent Poor Performer (“weak stick/scope?”)

- poor progress completing qualifications
- frequent snivels out of flights
- task saturation
- often loses “SA” bag (situation awareness)
- lacks confidence

Poor Performer - Interventions

- monitor performance closely
- remedial training
- crew with best instructor
- minimize collateral duties

Overconfident Senior Aviator - Characteristics

- away from the aircraft too long
- infrequent flight time
- “been there, done that” attitude (feels that experience replaces proficiency)
- NATOPS?
- intimidates junior aircrew

Senior Aviator - Interventions

- CO confront and counsel
- crew with other senior aviators
- additional flight time

Best Aviator - Characteristics

- may overestimate ability
- “pushes the envelope”
- underestimates mission risk
- violates NATOPS/SOP
- poor aircrew coordination (does not request input from other aircrew)

Best Aviator - Interventions

- CO confront
- clarify standards/SOP
- restrict flights

Behavior of the Failing Male Aviator

- “acting out” (alcohol excess, the red Corvette, partying)
- displays of bravado:
  - “carrier quals” at Happy Hour
  - unsafe flying
- macho posturing

Do failing “minority” aviators act differently?

- perhaps

Study by Berg and Moore of 12 failing female aviators

- emotional distress “hidden”

  (more depression, guilt, hopelessness)
- social withdrawal
- *NO* “acting out” or risk-taking

Why might failing female aviators behave differently?

- need for acceptance in the mostly male squadron
- do not want to be labeled as “weak” females

Pearls

- Female aviators may be affected by different stresses - compared to males
- Stressed aviators today may have more subtle signs of being overwhelmed
- DO NOT rely on the aviator to determine if he/she cannot compartmentalize!

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